Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

DRAFT
Conditional Major, Operating
Permit: F-08-005
Ingersoll Rand Company
Campbellsville, KY 42718
Date: 2/1/2008
Elahe Houshmand, Reviewer

SOURCE ID:	21-217-00013
AGENCY INTEREST:	4002
ACTIVITY:	APE20070001

SOURCE DESCRIPTION:

On September 19, 2007, Ingersoll Rand Company applied to the Division for the operation of an air compressor manufacturing facility in Campbellsville, Kentucky.

The manufacturing operations and processes at the Campbellsville facility include the following:

1. Compressor parts receiving and shotblasting,
2. Compressor parts cleaning (aqueous solutions not solvent based),
3. Compressor parts drying,
4. Compressor parts painting (powder paint line),
5. Compressor parts painting (Solvent based – identified as the wet paint line),
6. Compressor assembly operation,
7. Product test (minor use of gasoline for quality control testing of compressors powered by a gasoline engine); and
8. Final compressor storage and shipping.

POWDER AND WET PAINT LINES PROCESS DESCRIPTION:

The powder paint operation uses an electrostatic applicator. The powder paint is "Cured" in the heated curing oven. There are no VOC's released from the electrostatic coating process. All PM overspray are captured and returned to the spray powder reservoir. The air in the room and spray booth is captured by a 100% capture hood (room is the capture hood) and goes through a primary baghouse and a final HEPA filter. The air is then returned inside the building.

The wet paint booth uses solvent based paint (of various colors) along with solvent reducer to thin the paint to the consistency needed for the spray guns. The transfer efficiency is estimated at 50%. The remainder of the paint is captured on the filter media that lines the back of the spray booth. This wet paint operation is a specialty painting line and not the primary high volume line.

COMMENTS:

The potential emissions calculations are based on the assumption that only one spray gun at a time is used to perform wet coating operation.

TYPE OF CONTROL AND EFFICIENCY:

The only control devices in place are for PM/PM10 emissions.

Shotblasting operation has Cartridge & Rigid Cell Filters with 90% overall control efficiency.

All PM/PM10 overspray from the powder coating line are captured and returned to the spray powder reservoir. The air in the room and spray booth is captured by a 100% capture hood (room is the capture hood) and goes through a primary baghouse and a final HEPA filter. The estimated overall control efficiency of this system is 99%.

For the wet paint booth transfer efficiency is estimated at 50%. The remainder of the paint is captured on the filter media that lines the back of the spray booth. The control efficiency of this system is 90%

EMISSION FACTORS:

AP-42
Material balance
Engineering calculations

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations, is applicable to each affected facility or source, associated with process operations, which are not subject to another emission standard with respect to particulate matter emissions and commenced after July 2, 1975.

401 KAR 59:015, New indirect heat exchangers, is applicable with respect to particulate emissions and sulfur dioxide emissions from each affected facility, EP 03, with a capacity of 250 mmBTU/hr or less and commenced on or after April 9, 1972.

Conditional Major limits for VOC and HAP(s) will preclude applicability of:

1. 401 KAR 52:020, *Title V Permits,*
2. 401 KAR 59:225, New miscellaneous parts and products surface coating operations; and
3. 40 CFR 63, Subpart MMMM, Miscellaneous metal parts and products surface coating MACT.

EMISSION AND OPERATING CAPS DESCRIPTION:

Ingersoll Rand Company has requested voluntary permit limits of less than 90.0 tons per year of volatile organic compounds (VOC), 9.0 tons per year of individual hazardous air pollutant (HAP) and 22.5 tons per year of combined HAPs.

PERIODIC MONITORING:

The permittee shall maintain monthly records of the purchase and usage of any VOC/HAP containing material. VOC/HAP emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month VOC/HAP emissions; subsequently, tons of VOC/HAP emissions per rolling 12-month period shall be recorded. In addition, these records shall demonstrate compliance with VOC/HAP emission limitations listed herein for the conditional major limitations. For more details regarding all monitoring requirements, see the permit.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.